

RAPID LITERATURE REVIEW

On difficulties faced by patients following orthopedic day surgery: an update on International Evidence

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Keywords: orthopedic day surgery; continuity of care; postoperative experience; patient rehabilitation; ambulatory surgery; outpatient surgery

ABSTRACT

Background: An increasing share of orthopedic surgery is delivered as day surgery. Care during home rehabilitation becomes particularly important. To better provide continuity of care, understanding difficulties faced by patients is getting increasing attention by researchers and professionals around the world.

Methods: The authors systematically searched the PubMed, Embase and Web of Science databases for relevant articles on orthopedic day surgery patients' recovery experience after discharge from 2017 till present. Screening was performed strictly according to the inclusion and exclusion criteria, and finally, the relevant literature was read and summarized.

Results: A total of 5 articles met the criteria published between 2017 and 2022. A diversity of difficulties faced by patients was identified, including flaws related to follow-up, education, emotional support, unclear functional rehabilitation exercise guidance and other challenges identified by recent evidence.

Conclusion: Published studies indicate the importance and necessity of effective postoperative care for day surgery patients. This review also suggests that nurses should pay more attention to the recovery experience, and difficulties faced by orthopedic day surgery patients to provide high-quality continuity of care. The issue may not be receiving the best required attention in what should be a priority of healthcare management and concern with impacts on the patients' recovery.

Contribution to Evidence-Based Practice: The article contributes to an update on difficulties faced by orthopedic day surgery patients during their recovery and rehabilitation period. Professionals around the world can find a diversity of practical challenges summarized by recent international literature. This can support better patient care and rehabilitation planning following orthopedic day-surgery. Additionally, the article sustains that evidence-based nursing care can ensure better quality of care and contribute to the improvement of impacts on patients' rehabilitation.

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What do we already know about this topic?

An increasing share of orthopedic surgery is delivered as day surgery. Care during home rehabilitation has become particularly important. It is widely accepted that to better provide continuity of care, understanding difficulties faced by patients during rehabilitation needs more attention from healthcare managers and researchers. Difficulties have been identified in a sparse variety of studies throughout recent years.

What is the main contribution to Evidence-Based Practice from this article?

Through updating the evidence related to this topic, professionals have access to an update on difficulties faced by orthopedic day surgery patients during their recovery and rehabilitation period. The diversity of practical challenges summarized by recent international literature, can support better patient care and rehabilitation planning following orthopedic day-surgery.

What are this research's implications towards theory, practice, or policy?

The results of the study can enrich the understanding of concrete interventions necessary to improve recovery and quality of life of orthopedic day surgery patients. The recent literature assessed demonstrates that listening to patient expectations and needs is fundamental to identify ways of improving care and qualitative research methods seem to be fit for that purpose. Nursing managers should take steps to solve the recovery difficulties faced by orthopedic day surgery patients and improve the quality of continuity of care.

Authors' Contributions Statement:

Yuzhuo Chen and Hong Ji were responsible for the conception and design of the study. Yan Wu and Qing Wang worked on the article search and articles revision. Yuzhuo Chen wrote the paper and Hong Ji reviewed it thoroughly.

What do studies on day-surgery orthopedic patients' experience identify as personal unmet needs and difficulties? Day surgery, also known as ambulatory surgery or outpatient surgery, is surgery that does not require overnight hospital stay (Castoro et al., 2007). During recovery after discharge, patients are out of professional nursing observation and guidance, and encounter many problems and challenges which will affect rehabilitation. Through a literature review, we found that orthopedic day surgery patients' experience after discharge had received extensive attention from researchers. The literature search identified 5 articles which we summarized in terms of challenges and difficulties faced by patients. The main purpose of this literature review was, therefore, to identify recent evidence on difficulties of orthopedic day surgery patients during recovery after discharge and to determine the significance of this study.

Methods:

The PubMed, Embase and Web of Science databases were used, and the search terms were (("Continuity of Patient Care"[Mesh]) OR (postoperative experience) OR (postoperative recovery) OR (postoperative experience) OR (home recovery) OR (post-acute rehabilitation) AND (("Ambulatory Surgical Procedures"[Mesh]) OR (day surgery) OR (outpatient surgery) AND (orthopedic patients) OR (orthopedic patients) AND ("Qualitative Research"[Mesh]) OR (qualitative methods))). A filter was used to select articles from 2017 to the August 2022. Studies were included on two fundamental inclusion criteria. One, if qualitative research methods were applied, even if mixed methods were applied. Two, if the interviewees were patients who underwent orthopedic day surgery. As exclusion criteria, we defined articles which did not follow into the two inclusion principles.



Results:

A total of 27 articles were retrieved, and after excluding those articles that did not follow into the two inclusion principles, 5 articles were finally selected.

The first article (Larsson et al., 2022) applied semi-structured interviews to 18 patients two and three months post-operative between the ages of 18 and 81. Its main results suggest a set of challenges by patients. One is that patients have limited time to ask questions when undergoing day surgery, although sometime information about postoperative recovery is provided, but still many patients do not remember what was said in the session. Second challenge is that, when they arrive home, patients do not know where to turn to seek answers. Third, there is no regular follow-up visit after day surgery. Fourth, there is no confirmation that the process of recovery is evolving within the normal trajectory. Fifth, the article identified that patients' feelings of loneliness receives limited support from others.

The second article (Halting et al. 2021) used a combination of qualitative interview sub-studies and a survey. The authors applied individual interviews to 16 patients, 3-5 days post-surgery between the ages of 18 and 78. Its results identify patients' challenges and self-management needs. Firstly, patients lack information about postoperative self-management and felt unprepared for tailoring activities to their condition and for pain management. Patients received most of the information about postoperative self-management post-surgery at the day surgery unit, sometimes in noisy surroundings with no privacy and when they were still affected by the anesthesia drugs. The information was given in a fragmented manner and on the healthcare providers perspective. The oral and written information from the day surgery unit and the surgery over time could be vague, difficult to interpret and time-consuming to read. Second challenge identified was the strain of arranging and enduring transportation to and from the hospital and no assistance was offered by the hospital. Third, the patients found it difficult to adapt programs and advice to their specific individual needs. Fourth, as day surgery establishes new roles for both healthcare providers and patients, patients must utilize the resources made available to them. However, patients face difficulties assuming their roles as active partners and take the necessary actions in their self-management. The authors also identified a fifth challenge, namely that the

participants expressed difficulties in getting practical and emotional support both from their family and friends and from professionals to facilitate their self-management. Several patients assessed these calls as very important, as it gave them an opportunity to discuss their interpretation of information they had received earlier as well as their chosen self-management actions. Even so, some wished that the call had come later, since major problems appeared after the phone call, and they struggled to initiate telephone contact by themselves.

The third article (Patel et al. 2021) was a short-term mixed-methods study. The authors applied open-ended interviews to 14-day case unicompartmental knee arthroplasty (UKA) patients aging 48-80, 3-19 months post-surgery. Its results identify some patients' difficulties and needs. Firstly, patients wanted to be shown exercise face to face and the flexible therapy. Second, patients found it difficult to clarify how and when to take pain relief and blurry about its related instructions. Third, patients pointed out the necessity of community support and early follow up.

The fourth article (Churchill et al. 2018) applied in-depth semi-structured interviews to 8 patients 3 and 6 months postoperatively between the ages of 56 and 70 and 8 their caregivers between the ages of 52 and 68. Its main results identify some desires and challenges by outpatient total hip arthroplasty (THA) surgery patients. The first challenge was that patients did not know what was the optimal activity level and how to determine it, and usually adopted a wrong perspective (such as a trial-and-error approach). Patients and their caregivers needed more information on acceptable levels of activity after discharge, for safety reasons and to ensure that patients did not exceed what was appropriately based on their stage of recovery. Secondly, they were concerned with medications (i.e.: fear of over-medicating, dissatisfaction administering blood thinner injections). There were no clearer instructions regarding medication (such as unexpected adverse effects) and dosing to ensure that they could manage their pain. The third challenge was that the caregivers had difficulties to manage dual care-giving roles. Fourth, patients were often educated under the influence of operative anesthesia before discharged without their caregiver's presence, which jeopardized the effect of education and caused associated stress and confusion. The fifth problem identified was the lack of clear expectations for recovery, including their

expectations regarding surgery pain, which might have been underestimated by their knowledge of the surgical approach and the possibility for early mobility. Sixth, when unexpected situations occurred, patients and their caregivers were confused to solve them through any appropriate way. What's more, patient and caregiver needed more information regarding the effects of anesthesia and what to expect.

The fifth article (Odom-Forren et al. 2017) applied in-depth discussions to two focus groups of 19 patients and their caregivers aging 50.1 average. In the results section, the authors summarized the patient normal distressing symptoms after orthopedic day surgery including pain, nausea and digestive dysfunction, sore throat, mobility issues, insomnia, and caregivers' stress. In addition, self-management barriers of patients and caregivers' barriers were identified separately. The first barrier was the lack of knowledge concerning assistive devices, namely those associated with inability to use the toilet well or feeling dizzy in the shower. Patients couldn't think about use of toilet seat extenders and shower chairs. Second, a barrier to care identified was that of decreased intake of fluids and food. Third, patients lacked knowledge regarding sizing and the use of crutches. Fourth, patients didn't know how to posit their operative leg correctly to avoid and relieve pain. Fifth, poor access to effective pain medication was also a barrier. What's more, patients normally were confused about using ice, such as how long to leave it in place and the length of time between applications of ice.

Discussion:

Day surgery is an attractive option for a variety of orthopedic procedures that can lead to lower individual and societal costs, improved patient satisfaction, compared with inpatient hospitalization, while achieving equivalent health outcomes (Miller et al. 2018). Efficacy of postoperative care during recovery is an important factor for patients' rehabilitation and successful operation. The article (Li et al. 2022) has identified recent evidence on the development of the "person-centered" model of nursing care as it requires a better understanding of patient self-reported readiness for hospital discharge (RHD). This article contributes to combine that knowledge with the knowledge on post-discharge challenges faced by day surgery orthopedic patients in post operative recovery. The evidence identified shows that there is a large

variety of difficulties faced by patients in the context of post day surgery rehabilitation. A set of questions can, therefore, be put forth. One is, which healthcare professional should be responsible for solving each of the difficulties identified? Another question is, when is the most appropriate time for postoperative education and how to better conduct postoperative follow-up? The third question is how to meet the individual needs of patients and provide comprehensive and specific postoperative rehabilitation guidance? The fourth question is how to make patients and their caregivers adapt and coordinate various roles and carry out positive self-management? The fifth question is what should be done about the strain of arranging and enduring transportation? In practice, these five questions should be a priority for the development and improvement of healthcare management in the context of orthopedic day surgery (see table 1).

Conclusion and Recommendations

Through the analysis of the postoperative experience of patients following orthopedic day surgery, this article clarified that there are still many difficulties during their postoperative recovery. These findings are helpful to help healthcare professionals around the world in their efforts to provide better continuous nursing services for patients. The authors believe that nurse-led medical staff teams should be responsible to tackle each of the challenges identified by literature. Community nursing support for patients should also be strengthened. Nurses can carry out regular follow-up, especially in early postoperative period, through phone or modern information equipment and software to follow the rehabilitation process of patients and, according to the different conditions, provide patients with comprehensive and specific rehabilitation guidance, including on medication, diet nutrition, activities, social life, assistive devices, psychological counseling etc. and to meet the individual needs of patients. What's more, it is also necessary to strengthen the guidance and psychological counseling of caregivers to better help patients recover.

Main Contributions to Practice:

The article contributes to an update on difficulties faced by orthopedic day surgery patients during their recovery and rehabilitation period. Professionals around the world can find a diversity of practical challenges summarized by recent international

literature. This can support better patient care and rehabilitation planning following orthopedic day-surgery. Additionally, the article sustains that evidence-based nursing care can ensure better quality of care and contribute to the improvement of impacts on patients' rehabilitation.

Conflict of Interest:

none declared



Authors	Participants	Patients age	Methods and sample	Main difficulties during home-care
Larsson et al. 2022	Orthopedic day surgery patients two and three months postoperatively	18-81	18 participants Semi-structured interviews by telephone	<ul style="list-style-type: none"> - limited time to ask questions - do not know where to turn to seek answers - no regular follow-up visits - no confirmation about the process of recovery - limited support to feelings of loneliness
Halding et al. 2021	Knee arthroscopy day surgery patients 3-5 days post-surgery	18-78	16 participants Qualitative individual interviews	<ul style="list-style-type: none"> - fragmented information exclusively from the provider's perspective - the strain of arranging and enduring transportation - difficult to adapt programs to individual needs - difficulties assuming active self-management - difficulties in getting practical and emotional support
Pate et al. (2021)	Day case UKA patients range 3-19 months after surgery	48-80	14 patients open-ended interviews over the phone	<ul style="list-style-type: none"> - lack of face to face and the flexible therapy - lack of clear therapeutic education - lack of community support and early follow up
Churchill et al. (2018)	Outpatient THA surgery patients 3 and 6 months postoperatively	56-70	8 participants and 8 their caregivers in-depth semi-structured interviews	<ul style="list-style-type: none"> - difficulties to determine the optimal activity level - no clear instructions regarding medication and dosing - difficulties to manage dual care-giving roles - no optimal timing of postoperative education - lack of clear expectations for recovery - difficulties to deal with unexpected situations appropriately - lack of the information about the effects of anesthesia
Odom-Forren et al. (2017)	Any type of shoulder or knee day surgery patients one to two weeks after surgery	50.1(mean)	two groups (19 patients and caregivers) focus group in-depth discussions	<ul style="list-style-type: none"> - lack of knowledge of assistive devices - decreased intake of fluids and food - inability to perform crutch walking - incorrect positioning leading to increased knee pain - poor access to effective pain medication - confusion about the use of ice

Table 1: unmet needs *and* difficulties faced by day surgery orthopedic patients

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